

New US Continuation Application
Preliminary Amendment dated January 14, 2004

Amendments to the Claims

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims

1-15. (Canceled)

16. (New) A method for detecting an object in an area, comprising:
capturing a reference image of the area without the object present, wherein the area includes a patterned background with both light areas and dark areas;
capturing a live image; and
determining if the object is present by comparing the reference image and the live image.

17. (New) A method according to claim 1 wherein the area is at least part of a larger area.

18. (New) A method according to claim 2 further comprising at least one other area that at least partially overlaps the area, and the method further includes the step of determining if the object is present in the at least one other area by comparing the reference image and the live image.

19. (New) A method according to claim 2 wherein the larger area at least partially encircles an area to be monitored.

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20. (New) A method according to claim 2 wherein the larger area corresponds to an area to be monitored.

21. (New) A method according to claim 1 wherein the area corresponds to a monitored area.

22. (New) A method according to claim 1 wherein the area is a mask window.

23. (New) A method according to claim 1 wherein the patterned background includes an approximately equal amount of light areas and dark areas.

24. (New) A method according to claim 1 wherein the patterned background includes a number of parallel extending light areas and dark areas.

25. (New) A method according to claim 1 wherein the patterned background includes a checkerboard pattern of light areas and dark areas.

26. (New) A method according to claim 1 wherein the light areas and/or dark areas each have a size that is smaller than the object.

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27. (New) A method according to claim 1 wherein the determining step comprises the steps of:

determining a difference image by determining a difference in intensity between corresponding locations of the reference image and the live image; and

determining if at least a portion of the difference image includes a complement or inverse image of the object.

28. (New) A method according to claim 1 wherein the determining step comprises the steps of:

determining a difference image by determining a difference in intensity between corresponding locations of the reference image and the live image; and

determining if the intensity of at least part of the difference image exceeds a threshold value.

29. (New) A method for detecting an object in an area, comprising:
providing a patterned background in the area, wherein the patterned background includes both light areas and dark areas;

capturing a reference image of the area without the object present;

capturing a live image of the area; and

determining if the object is present in the area by comparing the reference image and the live image.

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30. (New) A method according to claim 14 wherein the area corresponds to an area of a floor, and the patterned background is fixed to the area of the floor.

31. (New) A method according to claim 15 wherein the patterned background is painted on the area of the floor.

32. (New) An object detection system, comprising:
a patterned background fixed to an area, wherein the patterned background includes both light areas and dark areas;
an image capture device for capturing a reference image of the area without the object present, and a live image of the area; and
a processing element for determining if the object is present in the area by comparing the reference image and the live image.

33. (New) An object detection system according to claim 17 wherein the area is at least part of a larger area.

34. (New) An object detection system according to claim 18 wherein the larger area at least partially encircles an area to be monitored.

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35. (New) An object detection system according to claim 19 wherein the larger area corresponds to an area to be monitored.

36. (New) An object detection system according to claim 17 wherein the area corresponds to a monitored area.

37. (New) An object detection system according to claim 17 wherein the patterned background includes an approximately equal amount of light areas and dark areas.

38. (New) An object detection system according to claim 17 wherein the patterned background includes a number of parallel extending light areas and dark areas.

39. (New) An object detection system according to claim 17 wherein the patterned background includes a checkerboard pattern of light areas and dark areas.

40. (New) An object detection system according to claim 17 wherein the light areas and/or dark areas each have a size that is smaller than the object.